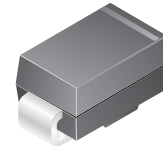


# RS1A - RS1M

## Fast Rectifiers

### Features

- Glass passivated junction.
- For surface mounted applications.
- Built in strain relief, ideal for automated placement.



**SMA/DO-214AC**  
COLOR BAND DENOTES CATHODE

### Absolute Maximum Ratings\* $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value							Units
		1A	1B	1D	1G	1J	1K	1M	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_A = 100^\circ\text{C}$	1.0							A
$I_{FSM}$	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	30							A
$T_{STG}$	Storage Temperature Range	-55 to +150							$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +150							$^\circ\text{C}$

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Thermal Characteristics

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	1.19	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient*	105	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead*	32	$^\circ\text{C}/\text{W}$

\*Device mounted on FR-4 PCB 0.013 mm.

### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value							Units
		1A	1B	1D	1G	1J	1K	1M	
$V_F$	Forward Voltage @ 1.0A	1.3							V
$t_{rr}$	Reverse Recovery Time $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	150				250	500		ns
$I_R$	Reverse Current @ rated $V_R$ $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	5.0				50			$\mu\text{A}$ $\mu\text{A}$
$C_T$	Total Capacitance $V_R=4.0\text{V}, f=1.0\text{MHz}$	10							pF

Typical Performance Characteristics

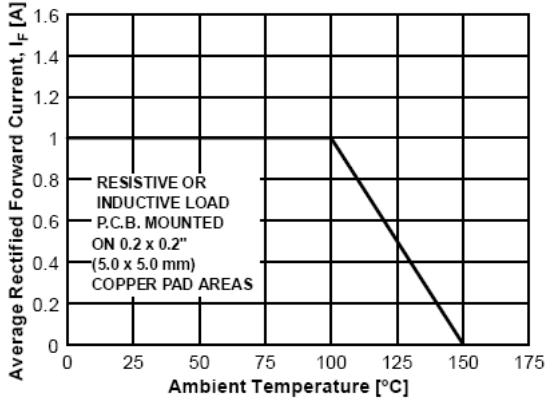


Figure 1. Forward Current Derating Curve

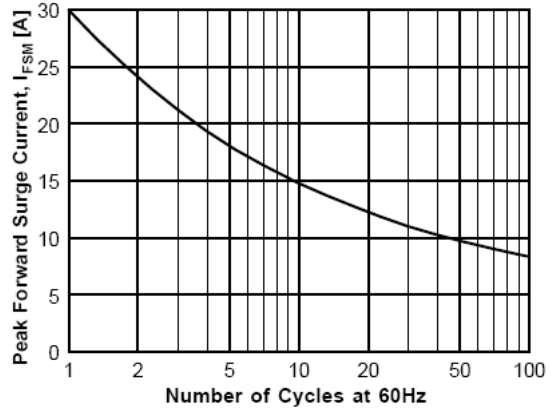


Figure 2. Non-Repetitive Surge Current

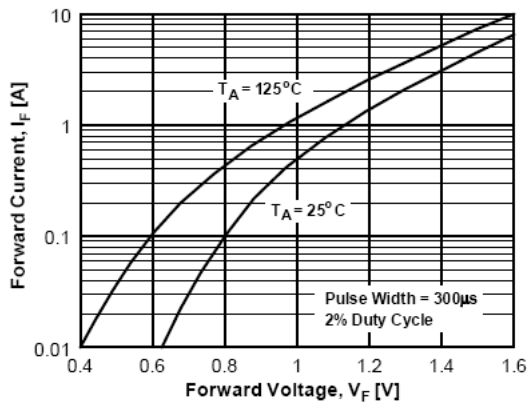


Figure 3. Forward Voltage Characteristics

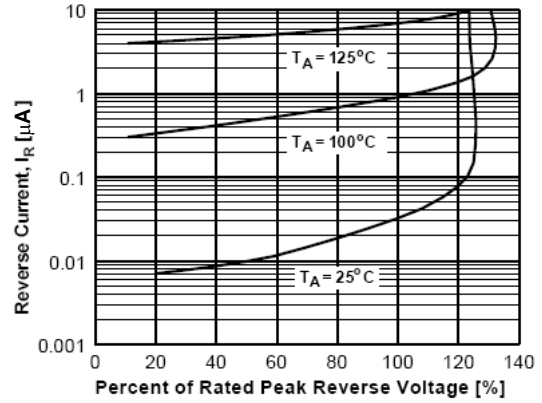


Figure 4. Reverse Current vs Reverse Voltage

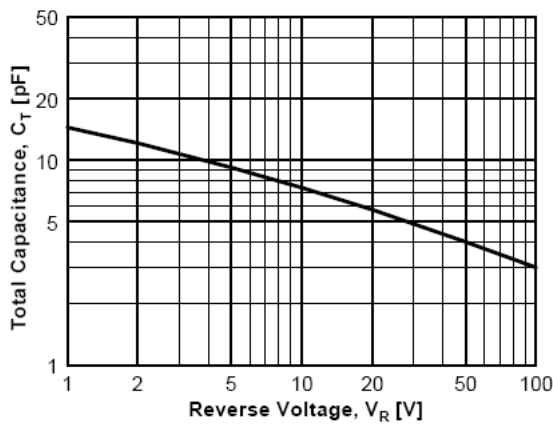








Figure 5. Total Capacitance



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CTL™	Gmax™	RapidConfigure™	TINYOPTO™
Current Transfer Logic™	GTO™		TinyPower™
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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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